IN THE SPECIFICATION:

Please replace the paragraph at page 1, lines 21-24, with the following rewritten paragraph:

Next, AFE (analog front end) data captured by an image capturing front controller are compensated and corrected (step 12). In the conventional art, the AFE can be combined with an image sensor or be present as an independent chip, and the AFE is utilized to convert the analog signal to a digital signal after scanning. This step is to calculate the CCD output-value according to the following equation (1):

$$\text{gain} \times (\text{CCD output-value} + \text{offset}) \qquad (1)$$

Please replace the paragraph at page 2, line 26 to page 3, line 4, with the following rewritten paragraph:

After the optical scanner has been powered on, the image sensor and the AFE of the optical module first ~~scans~~ sense the first reference white board to perform an image quality test. Meanwhile, the warm up of the lamp of the optical module is still not finished; hence, the image sensor and the AFE of the optical module ~~scans~~ sense in the Y direction along the second reference white board, to obtain brightness variation of every spot in the Y direction.

Please replace the paragraph at 4, lines 2-4, with the following rewritten paragraph:

The glass window 10 is for holding an object to be scanned. The optical module 20 is movable relative to the glass window 10. Its main elements include a lamp (such as CCFL), lens, an image sensor, A/D converter (such as an AFE), etc.

Please replace the paragraph at 4, lines 5-12, with the following rewritten paragraph:

The lamp emits light projecting to the object to be scanned on the glass window 10. Take a black and white picture as an example, the light emitted from the lamp hits the black or white spots, and the reflecting light is different. The reflected light passes through the lens and focuses. The image sensor transforms the optical signals to analog signals. The analog signals are converted by the A/D converter, such as an AFE, to become digital image data. The digital image data are sent to a computer host. Coupled with software such as a TWAIN driving program, image processing, word recognition, etc., the image may be edited.

Please replace the paragraph at page 4, lines 13-15, with the following rewritten paragraph:

The first reference white board 30 is located on one side of the glass window 10. When the optical scanner is powered on, the image sensor and the AFE the optical module 20 first ~~scans~~ sense the first reference white board 30 to perform an image quality test.

Please replace the paragraph at page 4, lines 16-21, with the following rewritten paragraph:

The first reference white board 30 is a totally white board. Assume the corresponding value of the white color is 240 as an example in this embodiment only (it may be set with other value). This value is a preset value, which can be stored in the software of a drive program or burned into firmware; in this embodiment, the value of 240 is burned into the image sensor. The image sensor and the AFE of the optical module 20

~~deteets~~ detect the value of the first reference white board 30 (at this time the lamp is still at the warm up stage. Hence output value of the image sensor and the AFE of the optical module 20 is not ~~necessary~~ necessarily 240) which is compared with the corresponding value 240 of the white color, and an AFE data is obtained. Then the AFE data may be used to correct output image.

Please replace the paragraph at page 4, line 22 to page 5, line 6, with the following rewritten paragraph:

The second reference white board 40 is perpendicular to the first reference white board 30 and is located on another side of the glass window 10. After the optical scanner has been powered on and the image quality test is completed, the optical module 20 is coordinated and moved in the Y direction (the second reference white board 40) to perform selected positioning operations for a ~~scanning~~ sensing process and to enable the brightness of the lamp to reach a stable condition.

Please replace the paragraph at page 5, lines 3-6, with the following rewritten paragraph:

By means of the invention, the optical module 20 can move in the Y direction, and use the dummy pixels on two sides of the image sensor to ~~scan~~ sense the second reference white board 40 and measure the brightness of every spot in the Y direction, to obtain brightness variations in the entire Y direction.

Please replace the paragraph at 5, lines 7-10, with the following rewritten paragraph:

Therefore the image sensor and the AFE of the optical module 20 can ~~scan~~

~~respectively~~ sense the first reference white board 30 ~~and the second reference white board 40~~ to obtain a value and to gain AFE data by comparing the value with the corresponding value through the image sensor and the AFE of the optical module 20, and then the image sensor and the AFE of the optical module can sense the second reference white board 40 to obtain brightness variations in the Y direction. ~~and~~ Finally, through software compensation and correction, normal digital image data may be obtained.

Please replace the paragraph at 5, lines 16-22, with the following rewritten paragraph:

Aside from using the dummy pixels on two sides of the image sensor to ~~scan~~ sense the second reference white board 40 to obtain brightness variations in the Y direction, an additional photosensitive diode may be mounted on one side of the image sensor 20 and the AFE of the optical module to ~~scan~~ sense and measure the brightness of every spot of the second reference white board 40 in Y direction. The brightness variations in the entire Y direction are also obtained. Then use the obtained AFE data and brightness variations in the Y direction, and through software compensation and correction, to obtain the normal digital image data.

Please replace the paragraph at 6, lines 2-7, with the following rewritten paragraph:

After the optical scanner has been powered on and has finished an image quality test, the image sensor and the AFE of the optical module 20 ~~scans~~ sense the second reference white board 40 to obtain brightness variations in the Y direction, and scans the third reference white board 50 to obtain required data. Through software compensation

and correction, more accurate digital image data than the first embodiment may be obtained. It also can achieve rapid preview or scanning.